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AUTHOR Gammel, J. D.
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ABSTRACT

The measurement of affect to support the achievement or nonachievement of affective education goals is an unresolved problem for educational institutions. The paper outlines a means for both developing an affective goal structure and identifying measurable indicators of affective behavior. To achieve this, it defines and discusses concepts related to educational affective context, affective objective hierarchy, affective learning objectives and affective classification matrix. Each of these concepts is further explained through the use of examples taken from an elementary and secondary school setting. The paper concludes that the application of these concepts to curriculum development will result in a more humane, as well as affective, education experience. (Author/RC)

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WORKING DRAFT

A Concept Paper

on the

"Measuring of Affect"

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J.D. Gammel Ph.D.

February 20, 1975

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Battelle
Center for Improved Education
505 King Avenue
Columbus, Ohio 43201

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ASSESSING AFFECT

A measurement of affect has been assessed by instruments ranging from a personality test, a statement of value, to a galvanic skin response. This paper will address the assessing of the experiences in the affective domain that take place in the classroom of elementary and secondary schools. How do we identify these experiences that take place in the affective domain?

AFFECTIVE EXPERIENCES

A child has "bad" feelings about his performance in a reading group. Another child is feeling pressure to perform beyond his ability. A teacher feels frustration because of his inability to communicate with a certain child. What does each of these situations have in common? In each of the statements feelings are influencing a child's or teacher's school-related attitude or performance. Each of these examples are of experience in the affective domain.

The affective domain has been the catch-all category for most of the unmeasurable or difficult to measure goals and objectives in areas ranging from values, attitudes, aesthetic education, and moral education, to feelings. It is as if some items were fitted into the cognitive and psychomotor domains, and then all remaining items were placed in the affective domain. "If you can't define or measure the concept, it must belong in the affective domain."

The affective domain deals with the emotional state or the person's feelings rather than logic. These feelings influence the person's attitudes, values, beliefs, morals, and aesthetics. Most persons would benefit from increasing their ability to identify, clarify, and understand the feeling dimension of their experience.

AFFECT IS FEELINGS

How does the educational literature define the affective domain? Krathwold, addressing affective objectives, states: "Affective...objectives emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience."

KRATHWOLD... A FEELING TONE

George Isaac Brown, in Human Teaching for Human Learning, defines "affective" as the feeling or emotional aspect of experience and learning. How a child or adult feels about wanting to learn, how he feels as he learns, and what he feels after he has learned are included in the affective domain. Brown, with his term "confluent education", seeks to integrate cognitive and affective elements of learning. He also states that "confluent education" is sometimes called "humanistic education."

BROWN... FEELING ON EMOTIONAL ASPECT OF EXPERIENCE

These definitions from the literature support the emphasis on feel as the key term in any definition of affective. The literature also notes the need for program development in the affective domain.

Harold C. Lyon, in Learning to Feel - Feeling to Learn, states: "...There is ample room and a great need for a bold move by educators and teachers toward the affective realm...Isolating cognitive learning from affective learning is a mistake--a mistake, the impact of which we are feeling on campuses and in classrooms all over the country. It's a mistake which has created a large number of intellectual half-men, brilliantly developed, perhaps, on the intellectual end of the continum, but severely lacking on the feeling or affective end."

LYON...

NEED FOR A BOLD MOVE TO AFFECTIVE

The assessing of affect is principle concern for any school which has programs that impact the affective domain. If affect is an individual's feeling or emotional state, then the assessing of affect would deal with assessing feeling and emotional states of an individual. It then follows that affective education programs deal with educational processes which help the individual either clarify or understand his feelings. These processes deal with the development of the total individual. Usually this involves some experimental processes for the students and places as much emphasis on the personal growth of the individual as on his cognitive development.

TOTAL PERSON

If the school intends to influence the development of the student's affective ability, then it assists administrators, teachers, and students to develop affective goals, provide affective experiences and assess increases (or decreases) in the student's affective development.

THE AFFECTIVE CONTEXT

The defining of the specific situation or context within which indicators will be observed or reported is critical to the assessing of affect.

THE PROCESS

The affective context consists of the environmental parameter within which the students affective experience takes place. In attempting to assess affective ability, the affective context must be defined. The affective context is defined through a four-step process. This process consists of (1) identifying indicators of affect, (2) defining affective experience, (3) identifying indicators of affective development, and (4) identifying a process for tracing affective development in context.

The affective experience can occur in the classroom, elsewhere in the school building, in the home, with peers, or in any other place that the teacher or program director decides is reasonable.

INDICATOR OF APPRECIATION?

In the well-worn example of affective behavior, a student voluntarily goes to a concert. This is taken as an indicator of appreciation of music. Defining of the concert as a situation is a step in the right direction; however, the meaning of that context is not explored; i.e., what's important about the concert that motivated the student to attend, and how does the student feel about the experience.

DEFINING THE AFFECTIVE CONTENT

In defining the affective context, attention should be given to (1) where the activity is to take place, (2) the content of the activity, i.e., a concert, a class activity on values, etc., (3) the significance for others, i.e., what other persons will be participating in the activity, (4) what process will be used to reflect on the meaning of the experience, and (5) how will data be collected on the identified affective indicators?

GUIDELINES FOR INDICATORS

In this age of behavioral objectives and the assessing of learning through demonstratable behavior, determining an individual's internal process, such as his feelings or emotions, creates some very difficult assessment problems. By definition, the person whose internal state is being assessed is a primary source of information on himself. The following are guidelines for developing affective indicators:

1. The individual is recognized as a unique resource for information on his or her feeling or emotional state.
2. The behavior of each individual gives cues which relate to his or her feelings.
3. The individual must establish a communication system which will allow he or she to explore feelings and emotions with others.
4. The meanings of each individuals feelings behaviors should be discussed with that individual.

Using these guidelines, indicators should be identified that relate to the affective context. The indicator provides the specifics and the context provides the parameters within which the specifics are assessed. It is the identification of specific within parameters that allow for the effective assessing of affect.

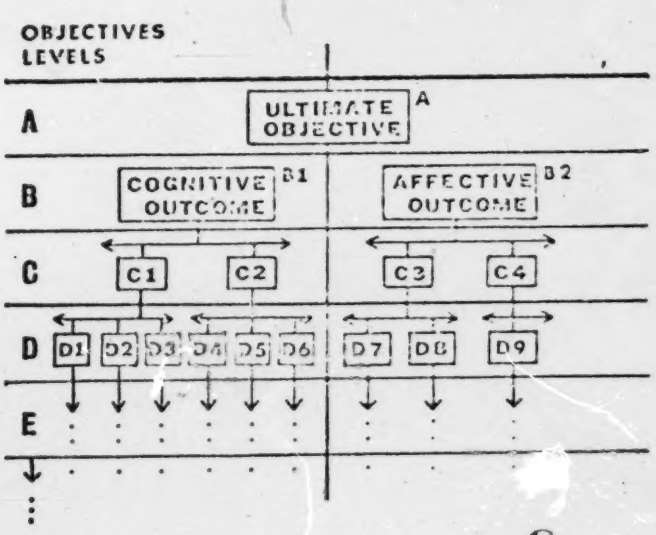
Once affective indicators have been identified, these indicators must be examined to determine what development would a student have to make in order to move toward a desired state?

Now that we have the affective context and specifics, the next step is to organize the affective data. To assist in the organization of the affective data, Battelle's Center for Improved Education has applied three educational systems concepts to the affective domain, (1) objectives hierarchy, (2) affective learning objectives and (3) classification matrix. By using these concepts, the school system or teacher can identify the goals and direction of the affective program, identify specific student affective learning to be influenced by the program, and a means for classificating the affective data to assist in the reporting and analysis. The following section will discuss the application of each of these concepts.

ORGANIZING AFFECTIVE DATA

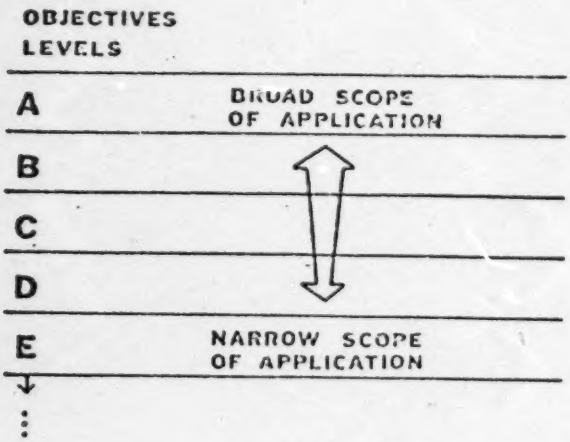
The Objectives Hierarchy

The learning process requires rationally ordered objectives or it will dissolve into a series of unrelated tasks leading nowhere. Perhaps the most successful way of ordering educational objectives is in the form of a hierarchy or pyramid. The following figure is a graphic presentation of the levels of objectives in an objectives hierarchy.

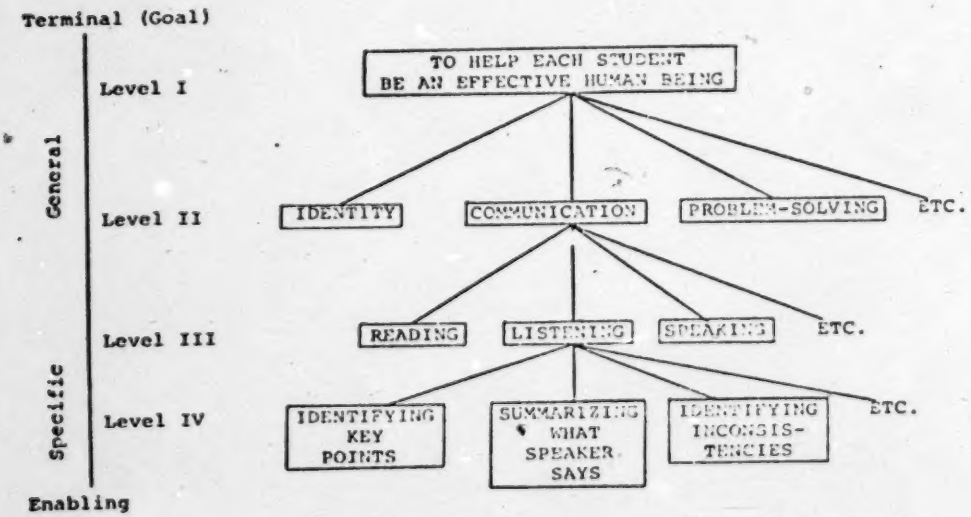


OBJECTIVES HIERARCHY

The objective hierarchy starts with the general, overall, end-product objective at the top and proceeding down through more and more specific objectives. In this way, the hierarchy provides a comprehensive functional means of organizing varying levels of objectives.



The hierarchy links objectives into an internally consistent focusing of energies toward the accomplishment of the ultimate objective. An example follows of an objectives hierarhcy, from "enabling" objectives at the bottom to a "terminal" behavior at the top:



GENERAL TO SPECIFIC

It should be remembered that an educational objectives hierarchy includes both affective and cognitive learning. The objectives in each domain contribute and build toward the ultimate objective or overall goal.

Affective Learning Objectives

Affective learning objectives are the key to the systematic planning and implementation of instruction which will influence the positive affective development of the student. By affective objectives, we mean the specification of measurable outcomes by the teacher or students related to individual emotional or feeling states. Because emotional or feeling states are internal states, non-observable within the individual, the outcome and measures must be defined in terms of the internal state of the individual.

MEASURABLE AFFECTIVE OUTCOMES

How does a teacher and/or student go about planning for affective development? The first step is to get down in writing what you hope to accomplish. This first draft can either be general or as specific as you are able to make it. The more specific the accomplishment statement, the easier later planning will be. The most important point is to capture, to your satisfaction, the essence of the program. At this stage many people only write down items that are easily defined and measurable. Then, when they discuss the impact of the program, they note affective related outcomes which do not appear in the original goals or objectives.

AFFECTIVE PURPOSE

Once you have a statement of the affective purpose of the program, you must identify indicators related to that purpose. These indicators can be reported by individual students or by others (teachers, aides, or other students). The indicators must be measureable. That is, they should be able to be quantified. The affective goal of a program might be to foster increased self-understanding in students. An affective indicator of increased self-understanding could be that each student be able to express feelings he had when experiencing a certain classroom activity. Another indicator could be that the student would reflect on the meaning that certain past experiences have had for him and discuss his reflection with a small group of students in the classroom setting.

AFFECTIVE INDICATORS

It is our position that the indicators should not identify certain emotions or feelings as being "good" or "bad". The indicators should indicate that the individual student is engaged in a process and give some indication of the quality of that engagement, both in terms of the student's perceptions and others' perceptions. The indicators should also be related back to the broad goals of the program. Our proposed method for relating the indicator back is an objectives hierarchy...to be discussed later.

STUDENT ENGAGED IN PROCESS

In addition to the specified objectives, data will appear that will indicate what elements of the program are having an impact on the affective development of the student. It is our position that this important type of data should be collected and reported. We call these data, "artifacts of desired change" which give an indication of the program's impact on affective development. While it is an effort to both plan for the unexpected and evaluate the total impact of a program, to exclude these data would not allow you to evaluate the full impact.

UNEXPECTED OUTCOMES

In addition to the specific learning objectives, certain normitive measure provide valuable information on the effectiveness of affective programs. Many of these instruments have been developed to assess dimensions of the personality. Norms for these instruments have been developed for the instrument over a period of years with large numbers of subjects. This type of instrument is very useful in assessing the long-range effect of the affective program. Some examples of these instruments are "Coopersmith Self-Esteem Inventory" (a measure of elementary student's self-concept), "Study of Values" (a value survey by Allport, Vernon, and Lindzey), "Self-Acceptance Scale" (an adjective checklist by Berger), and "FIRO-B" (an attitude survey by Schultz). The instruments allow individuals to compare their responses to those of other individuals. Normative instruments provide valuable developmental information about an individual if comparative measures are taken over time. In addition, normative measures can provide individuals valuable insights into their personalities as they compare their scores with scores of persons in other types of employment or categories.

NORMATIVE INSTRUMENTS

The normative measures do not enable a teacher to collect short term (daily, weekly, monthly) indicators of individual development or, more importantly, non-development or regression. These measures do not provide information for revising or directing the curriculum. The teacher, administrator, and curriculum director need to know what actions are necessary if the student is assessed to have a low self-concept (or a high self-concept, for that matter). Normative instruments can provide long-term developmental information for both student and the teacher.

INSTRUMENT LIMITATION

Affective Classification Matrix

The classification is used to gather data from a wide range of content areas. It has two dimensions of impact -- the level of impact and the focus. There are five levels of impact: (1) experiencing, (2) stating or doing something particular, (3) standing on a statement or action by telling what it means personally, (4) relating an activity to some past experience, and (5) saying something about how the activity might effect one's future behavior. There are four levels of focus: (1) intellectual processes, (2) behavioral processes, (3) what one says about his feelings relating to intellectual processes, and (4) what one says about his feelings relating to behavioral processes. By placing the levels of impact against the four areas of focus, we come up with a two-dimensional matrix structure. The purpose of the matrix is to pinpoint the teachers and/or students intent for the affective objective. In addition, the matrix provides a means of comparing data from varying content areas. The classification system allows the student, teacher, administrator, parent, and citizen to keep track of the students progress without dictating the specific goals and objectives. The system also allows for the reporting of results at all levels of the educational structure from the achievement in the affective domain of an individual student to a total school system.

The affective classification matrix can be used to gather data from instruction areas where the content differs widely. The system helps clarify intent, and it makes it possible to set clear objectives which deal with students' feelings. It also helps each student determine how he can contribute to the attainment of affective objectives. It traditionally has been difficult to assess the attainment

CLASSIFICATION MATRIX

LEVEL	FOCUS: PROCESSES — Intellectual	FOCUS: PROCESSES — Behavioral	FOCUS: EXPRESSIONS OF FEELINGS — Intellectual	FOCUS: EXPRESSIONS OF FEELINGS — Behavioral
Experience				
Stating or Doing				
Relating to Personal Meaning				
Relating to Past Experiences				
Predicting Future Effect				

of objectives related to feelings and personal meanings, and humanistic education programs traditionally have suffered from the lack of practical measurement tools. While not perfect, the affective classification system can help solve this problem.

SUMMARY

Assessing affect is a difficult but not an impossible task. The first step is to define what you as a teacher or administrator mean when you say affect. Once you have defined the term, the humane application of these tools and concepts of affective curriculum development will enable you to develop a successful affective program. It should be the intent when assessing affect to bring more meaning to the educational experience, not less. If this is to come about, the teacher, administrator, parent, or student must approach the assessment with a high degree of acceptance for the students values and opinions. In this manner the affective program will demonstrate the spirit as well as the letter of the program.

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